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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,906	02/12/2002	Reijo Lylykangas	3502-1008	3661

466 7590 03/01/2006

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EXAMINER

TRAN, HIEN THI

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 03/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/072,906	LYLYKANGAS ET AL.	
	Examiner	Art Unit	
	Hien Tran	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 1, line 20 it is unclear as to what is intended by "straight cells" and whether the straight cells are the same as to the ceramic reactor cells set forth in line 19.

On page 8, lines 20-21 it is unclear as to where it is shown that the corrugated sheets 3 are connected to the housing by the weld joint 10.

Appropriate correction is required.

2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 27-30 are rejected under 35 U.S.C. 112, first and second paragraphs, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 27, it is unclear as to where it is disclosed in the specification that the sheet and part of the housing are joined together simultaneously. See claim 30 likewise.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. The art area applicable to the instant invention is that of catalytic converter.

One of ordinary skill in this art is considered to have at least a B.S. degree, with additional education in the field and at least 5 years practical experience working in the art; is aware of the state of the art as shown by the references of record, to include those cited by applicants and the examiner (*ESSO Research & Engineering V Kahn & Co*, 183 USPQ 582 1974) and who is presumed to know something about the art apart from what references alone teach (*In re Bode*, 193 USPQ 12, (16) CCPA 1977); and who is motivated by economics to depart from the prior art to reduce costs consistent with the desired product characteristics. *In re*

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Clinton 188 USPQ 365, 367 (CCPA 1976) and *In re Thompson* 192 USPQ 275, 277 (CCPA 1976).

9. Claims 27, 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usui (5,620,666) or Matsumoto (6,288,008) in view of Kono et al (5,403,558) and Chapman et al (4,331,631).

With respect to claims 27, 30-31, Usui discloses a method of manufacturing a metal reactor cell that has overlapping corrugated sheets and a housing, the method comprising: preoxidizing the overlapping corrugated sheets and joining the preoxidized sheets simultaneously to each other and to at least a part of the housing by laser welding, electric welding, etc. (see, for example, col. 7, lines 36-42, 55-61; col. 8, lines 11-19; col. 10, lines 38-43).

Similarly, Matsumoto discloses a method of manufacturing a metal reactor cell that has overlapping corrugated sheets and a housing, the method comprising: preoxidizing the overlapping corrugated sheets and joining the preoxidized sheets simultaneously to each other and to at least a part of the housing by laser welding, electron beam welding, etc. (see, for example, col. 2, lines 33-46; col. 9, lines 35-37; col. 14, lines 14-16).

The method of Usui or Matsumoto is substantially the same as that of the instant claims, but is silent as to whether the sheets may be joined by resistance welding.

However, Kono et al shows the conventionality of joining the sheets and housing by resistance welding, laser welding (col. 7, lines 13-15).

It would have been obvious to one having ordinary skill in the art to select an appropriate type of welding, such as resistance welding as taught by Kono et al in the method of Usui or

Matsumoto, to join the sheets and housing, since such type is conventional in art and no cause for patentability here.

10. Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usui (5,620,666) or Matsumoto (6,288,008) in view of Kono et al (5,403,558) as applied to claims 27, 30-31 above and further in view of Chapman et al (4,331,631) and Cairns et al (GB 1,546,097) and Chapman et al (4,331,631).

The modified method of Usui or Matsumoto is substantially the same as that of the instant claims, but is silent as to the specific condition of the preoxidizing step.

However, Chapman et al discloses the conventionality of providing a preoxidizing step including annealing the sheets at a variety of temperatures and times (see, for example, col. 11, lines 15-19).

Cairns et al also discloses provision of preoxidizing the sheets for forming an alumina layer on the surfaces by heating in air at a specific temperature and time.

It would have been obvious to one having ordinary skill in the art to select a specific condition for preoxidizing step as taught by Chapman et al and Cairns et al in the modified method of Usui or Matsumoto so as to form a high surface layer on the surface of the sheets as such is conventional in the art and no cause for patentability here.

Response to Arguments

11. Applicant's arguments with respect to claims 27-31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1454. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HT

Hien Tran
Primary Examiner
Art Unit 1764